

Offset credits for emissions ignite boom

Valley may cash in on industry
created by global warming fight.

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ATWATER - Carl Morris wasn't trying to save the planet when he spread a 7-acre sheet of black vinyl over Joseph Farms' new cow manure lagoon in 2004. His goal was to capture methane to generate electricity.

To his surprise, he found he could do both - and get paid for it.

"As soon as we started generating, I got a cold call," he said.

The dairy farm became a supplier of "offsets," marketable credits purchased by companies or others trying to compensate for the amount of carbon dioxide, methane or other greenhouse gases they emit. His manure-digesting system has generated a stash of greenhouse gas offsets - some of which Morris has sold, some of which he's keeping - worth nearly \$250,000 at current market prices.

Joseph Farms is on the front end of a boom. Offsets are a lucrative if somewhat controversial industry, a \$5 billion-a-year global business spawned by the fight against global warming.

By purchasing offsets, individuals or companies

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unable to reduce their own "carbon footprint" are paying others that can. One glamorous example: To compensate for the carbon exhaust from his private jet, Gov. Arnold Schwarzenegger has donated money to a North Coast forest that has restricted its logging activities. Voila: His jet travel becomes "carbon neutral."

There are scores of other offsets. Cattle ranchers in North Dakota and corn growers in Iowa earn credits by managing their land in a way that promotes carbon storage in the soil. Wind farms from China to Solano County register as offset providers. And sources of methane — from manure, old coal mines or the decaying garbage in a landfill — are being hunted down, burned up and cashed in.

Offsets could become a new source of income for Central Valley agriculture. Farm industry groups and University of California researchers are working to pin down ways farmers can cut emissions and earn offsets. Yolo County tomato farmers could generate offsets by switching to organic fertilizers. Lodi grape growers might qualify by planting carbon-trapping cover crops between rows of vines.

"We're not ready for prime time, but we are working on it. And there is huge interest," said Cynthia Cory, director of environmental affairs for the California Farm Bureau Federation.

Customers pay anywhere from \$3 to \$15 per ton of carbon dioxide or its equivalent for offsets. When House Speaker Nancy Pelosi led a delegation to Europe last spring, she personally paid \$529.94 to the Fred van Eck Forest, the same forest favored by Schwarzenegger, to offset the trip's carbon footprint.

Who else is buying offsets these days? A growing list of corporations and individuals. Google Inc., Safeway Inc. and FedEx Kinko's, to name a few. The Vatican is putting money into a tree-planting program in Hungary. The Cincinnati Reds went to bat for a wind farm in India, buying enough credits to offset the carbon emitted at a single home game.

Why are they buying? Largely to placate customers, shareholders and employees who are nudging them to get serious about global warming.

Some companies are getting customers directly involved: Pa-



Joseph Farms general manager Carl Morris walks across a vinyl tarp that traps methane gas at the Atwater facility to generate electricity — and now carbon pollution credits that can be sold to businesses or others trying to offset their own production of harmful greenhouse gases.

Sacramento Bee/Arne Chadwick Williams

month onto their bills to help offset the utility's carbon footprint. The Sacramento Municipal Utility District is starting a similar program later this fall.

The new "Earth Rewards" credit card from General Electric lets cardholders designate up to 1 percent of their purchases to offsets. On San Francisco-based TerraPass Inc.'s Web site, customers can calculate the carbon footprint of a wedding — the impact of guests driving and flying in — and then buy enough offsets to compensate. A small wedding will cost about \$200, which goes to support a wind farm or cow-manure project.

For now, the vast majority of offsets are bought and sold overseas as corporations struggle to comply with the Kyoto treaty on global warming. In the United States, which refused to sign the treaty, offsetting one's carbon footprint remains a voluntary pursuit, one that generated a mere \$50 million in revenue last year. But the sales volume is growing,

effect in 2012 — the scramble for offsets will begin in earnest.

"There's a lot of opportunity here in California," said Gabe Petlin, director of carbon markets for San Francisco offset consultant 3 Degrees Group Inc.

But as demand heats up, so does the scrutiny. A growing legion of critics says farmers, wind generators and others sometimes get paid for projects of dubious value to the environment.

Joseph Romm, a senior fellow with the Center for American Progress, a left-leaning Washington think tank, says it's wrong to pay someone an offset fee for preserving trees that already exist, or for generating electricity at a wind farm that's already been built.

"The whole question about offsets is: 'Can you prove whether the money made the difference?'" Romm said. Often the answer is no, he said.

In recent months, Congress and the Federal Trade Commission have begun looking into al-

some embarrassing publicity, such as a Business Week story in March arguing that "some deals amount to little more than feel-good hype." One example cited by Business Week was an Arkansas landfill that, under pressure from environmental regulators, built a system for trapping methane gases. Years later the landfill operator began selling offsets to offset retailer TerraPass, which markets the credits to consumers. TerraPass told the magazine the offsets are legitimate but said it will re-evaluate landfill projects.

Defenders say most offsets are for real. Getting paid to preserve an existing forest is perfectly appropriate, Petlin said. The same is true with wind farms, many of which depend on revenue from offsets to help support a business that is extremely costly to operate.

Without offsets, "no wind power plants would get built," said Jan Johnson of PPM Energy, which runs the High Winds

tificates, to make the wind farm pencil out financially, she said.

A key reason why offsets remain controversial is there's no single standard for evaluating whether a project is legitimate.

The United Nations, which oversees the Kyoto offsets, says preserving existing forests isn't enough to justify an offset credit: new trees must be planted. But the California Climate Action Registry, a nonprofit entity given the task by the Legislature to draw up rules for the state, has given its blessing to the mere preservation of existing forests, such as the Humboldt County location that caught Pelosi's and Schwarzenegger's attention. Several other nonprofits are promulgating standards of their own.

"We don't have a common definition of what a legitimate offset is," said Mark Trexler, director of global consulting for Ireland-based offset trader EcoSecurities.

Many offsets are bought and sold in private transactions, with each side angling to assess the

out there and buy any old offsets," said James Heath, an offset buyer for EcoSecurities.

Some groups, such as the Gold Standard Foundation, a Swiss nonprofit, will certify only projects made possible by the prospect of future revenue from carbon offsets. Others, such as the Chicago Climate Exchange, a voluntary offset market, rely on a "better than business-as-usual" standard. If a project lowers emissions beyond industry norms, it counts as an offset, regardless of whether it was developed with the offset market in mind.

That's how a sprawling Atwater dairy farm became an offset leader.

Joseph Farms — founded by Joseph Gallo, the estranged brother of winemakers Ernest and Julio Gallo — wasn't thinking about offsets when it spent more than \$2 million on a digester system to capture methane from the decomposing manure of some of its 17,000 dairy cows. The plan, instead, was merely to generate electricity and heat for its cheese factory. The farm received \$1 million in state grants to help build the project.

Today the project is notable for its massive tarp, which rests atop a 17-foot-high berm surrounding the manure lagoon. Inflated with methane, the tarp resembles a 7-acre bounce house.

"This is the fun part," Morris, the dairy's manager, said as he walked across the airtight tarp, which seals in the smell.

The calls from offset brokers added to the fun. It turned out the contraption captures the equivalent of 30,000 tons of carbon dioxide a year, the carbon footprint of 1,500 average Americans.

The first time a broker called him, Morris was almost speechless.

"I said, 'You want to pay me for what?'"

Now the former accountant has become a savvy offsets generator. In his office, sitting behind an oak desk the size of a dinner table, Morris flipped through a 3-inch-thick folder of offsets information.

To date, Morris has held onto most of Gallo's offset credits, waiting for prices to improve. But he, like others, is uncertain about where the industry is headed.

"This is such a strange commodity and such a new market, it's very hard to predict," he said. "The reality is, nobody knows."

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